

REMARKS

Reconsideration and allowance of this application are respectfully requested, in view of the above amendments and the following comments.

Claims 35-49 and 51-81 are pending in the application, with Claims 35, 74, 75 and 76 being independent. Claims 36, 38-49, and 52-73 have been withdrawn from consideration. By this Amendment, Claims 37 and 50 are cancelled without prejudice to or disclaimer of the subject matter contained therein, Claims 35 and 51 are amended, and new Claims 74-81 are added, to provide a scope of protection commensurate with the original disclosure.

Abstract

The Examiner has stated that the application does not contain an abstract of the disclosure. Applicants note that the PCT application that they submitted under 35 U.S.C. 371 does contain an Abstract, on the cover page. A copy of that application (WO 99/58552) is enclosed. Applicants have amended the Abstract, however, to place it in better form under U.S. practice.

The Section 112 Rejections

Claims 35, 37, 50 and 51 have been rejected under §112, second paragraph, for reciting subject matter that has been withdrawn from consideration. In response, Applicants have cancelled Claims 37 and 50, and have amended Claims 35 and 51 to read on the elected invention. Withdrawal of the rejection is thus respectfully requested.

Claim 51 has also been rejected under §112, first paragraph. While Applicants do not necessarily agree with the Examiner's contentions, Applicants have obviated the rejection by amending Claim 51 to recite "a composition comprising a peptide according to Claim 35 and a carrier or diluent therefor." New Claim 80 is more specific; it is directed to a composition in which the peptide consists of Seq ID No. 17. Similarly, new Claim 81 is directed to such a composition in which the peptide consists of Seq ID No. 428. Reconsideration and withdrawal of the rejection are respectfully requested, as regards all three of the pending claims that are directed to peptide-containing compositions.

The Section 102(b) Rejection

Claims 35, 37 and 50 have been rejected under §102(b) as allegedly being anticipated by WO 96/31605.

WO 96/31605 describes a 34 amino acid peptide fragment encoded by a mutant TGF- β receptor gene. The peptide fragment has the sequence of SLVRLSSCVPVALMSAMTT-SSSQKNITPAILTCC. That is longer than both Seq ID No. 17 and Seq ID No. 428 and, therefore, different from Seq ID No. 17 and Seq ID No. 428.

By this amendment, Applicants have obviated the rejection. Claims 37 and 50 have been cancelled. Claim 35 as amended recites "an isolated peptide selected from the group consisting of Seq ID No. 17 and Seq ID No. 428." New Claim 74 is more specific; it is directed to an isolated peptide consisting of Seq ID No. 17. Similarly, new Claim 75 is directed to a peptide consisting of Seq ID No. 428. Reconsideration and withdrawal of the Section 102(b) rejection are therefore respectfully requested, as regards all three of the pending claims that are

directed to peptides per se.

New Claims to Process of Stimulating T Cell Proliferation

The present invention relates to Applicants' discovery that peptides that are fragments of protein products arising from frameshift mutations in genes associated with cancer are capable of stimulating the proliferation of T cells from human cancer patients.

Newly presented Claims 76-79 are directed to this discovery, in that they claim a method of stimulating the proliferation of human T cells, that involves the following steps: i) obtaining T cells from a human cancer patient and ii) contacting the T cells obtained in step i) with a peptide comprising Seq ID No 428 (Claim 76) or, more preferably, comprising Seq ID No. 17 (Claim 77). Claims 78 and 79 are narrower; they specify that the peptide is precisely Seq ID No. 17 (Claim 78) or precisely Seq ID No. 428 (Claim 79).

WO 96/31605 discloses a mutant peptide fragment that comprises both segments, Seq ID Nos. 17 and 428, but it does not teach or suggest using that peptide to stimulate the proliferation of human T cells. Instead, the reference only teaches using the mutant peptide to generate antibodies that can be used in immunotherapy. Applicants submit, therefore, that new Claims 76-79 are also patentable over WO 96/31605.

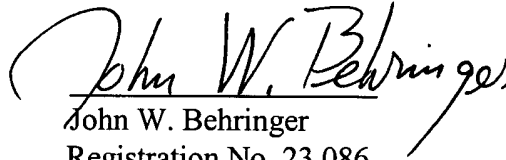
Applicants also submit that examination of the newly added method claims can be made without undue burden, as the claimed method cannot be practiced without using a peptide that comprises Seq ID No. 17 or 428, both of which have already been searched.

Conclusion

In view of the above amendments and remarks, Applicant submits that all of the Examiner's concerns are now overcome and the claims are now in allowable condition. Accordingly, reconsideration and allowance of this application is earnestly solicited.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our address given below.

Respectfully submitted,


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